

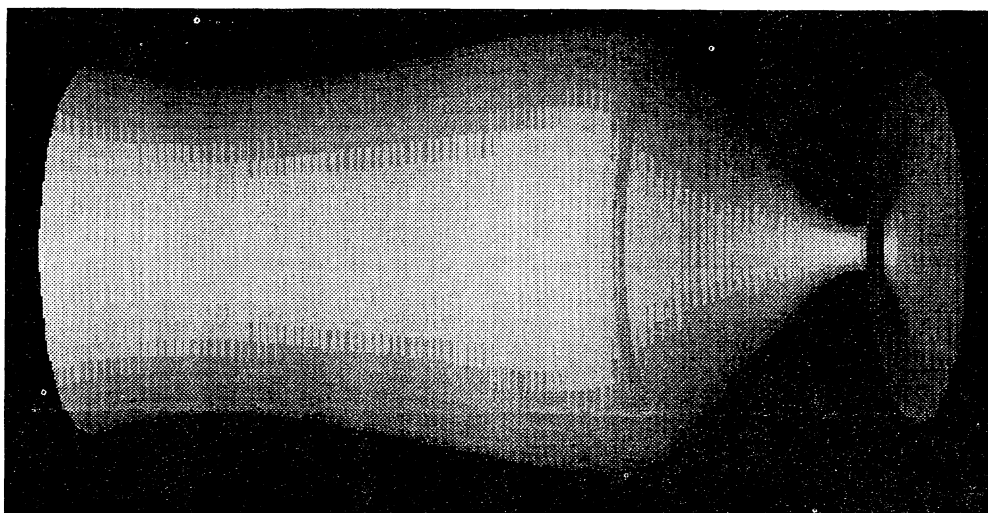
Canberra
Amiga
Users
SociEty
Inc



NEWSLETTER

September 1990

Lines Curves Wire Shade Map Panel



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AIMS OF THE SOCIETY

Canberra Amiga Users Society Incorporated (CAUSE) is an independent group (currently with about 300 members) formed for the benefit of people who own, use or are interested in the Commodore Amiga computer.

BENEFITS

Benefits include a bi-monthly newsletter, monthly meetings, discounts (see over page), bulletin board, Public Domain library, special interest groups and the opportunity to meet and exchange ideas with other users.

SUBSCRIPTIONS

Membership of the Society is available for an annual fee of \$20. This fee may be paid, with a filled-in application form, either to the Membership Secretary at any of the monthly meetings or by mail to the Membership Secretary, PO Box 596, Canberra 2601.

MEETINGS

Meetings are held at 8 pm on the second Thursday of each month in the auditorium at the Canberra Workers' Club in Childers St, Civic. The dates for the next few meetings are 13 September, 11 October and 8 November. Members are welcome to use all Workers' Club amenities on the night.

The Beginners' Group runs from 7-8 pm prior to each meeting.

Details of upcoming meetings and main topics will be advertised in the Canberra Times "Fridge Door" the week of the meeting.

BULLETIN BOARD

The CAUSE bulletin board is online 24 hours and is maintained by our Sysop Peter McNeil and his team. To be a member of the bulletin board, you need to pay \$5.00 additional yearly subscription.

The telephone number of the bulletin board is 2551469 and of the Sysop 2545545 (h).

NEWSLETTER CONTRIBUTIONS

BECAUSE is produced bi-monthly. Contributions to the newsletter can be submitted to the Editor via the newsletter area of the bulletin board, at the monthly meetings or to The Editor, PO Box 596, Canberra 2601.

Articles, reviews, comments and graphics are always welcome. Where possible, please provide them in Amiga readable format ie a disk file in ASCII, Wordperfect, Scribble!, Textcraft, Transcript, Notepad or Amiga graphic format. The deadline for contributions to the newsletter is the 15th of the month preceding production.

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ADVERTISING

	First Run	Rerun
Full page	\$35	\$25
Half page	\$30	\$20
Quarter page	\$25	\$15

Copy is to be provided to the Editor either in Amiga graphic file format or as appropriately sized printed copy. First Run prices are applicable if the Editor has to format the advertisement.

PRODUCTION

The Editor for July's newsletter was David Wilson. The copy was formatted using Professional Page v1.3 and printed on a Postscript printer by Desktop Utilities.

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CAUSE COMMITTEE

Director	Jonathan Bishop	2811064 (h)
Vice Director	Peter McNeil	2545545 (h)
Secretary	Jeff Wilson	2477330 (h)
Membership Secretary	Berenice Jacobs	2547248 (h)
Treasurer	Terry Sullivan	2548950 (h)
Committee	Simon Woods	2931808 (w)
	Chris Townley	2485922 (h)
	Simon Tow	2888362 (h)
	Trevor Raddatz	2885085
Editor	David Wilson	2918324 (h)

THIS MONTH'S COVER

The drawing of a cup was produced by Piers Goodhew using Surf, a public domain bezier surface editor. Piers reviews Surf on page 12 of this newsletter.

Editorial

Welcome to the September BECAUSE.

The club has been fairly active since the last newsletter. The Hardware SIG has been rejuvenated - see Peter McNeil's HHH on page 4 for more details. We have set up a Feed-back Subcommittee to organise and register members' experiences and impressions of the various local Amiga dealers and repairers. The Subcommittee consists of Simon Woods, Peter McNeil and Jonathon Bishop any of whom can be approached either at meetings or by phone. The experiences and impressions will be relayed in Group form to the businesses involved so that they can judge where their strengths and weaknesses lie and improve their performance if necessary. Group members will be asked to rate any businesses they have dealt with and these ratings will be published in this newsletter along with any replies received from businesses listed.

The fourth CAUSE disk should be for sale at the next meeting. This disk contains some high quality local material compiled by Wayne Rochester. Some of the material was submitted for this newsletter but was considered more suited to electronic format. It is well worth the paltry fee. Speaking of CAUSE disks, if you received a CAUSE III disk incorrectly marked "CAUSE II", please bring it to the next group meeting and Berenice will exchange it for you.

A subcommittee has been set up to look at ways of improving the Beginners' Group. The subcommittee of Simon Tow, Jeff Wilson, Simon Woods, Peter McNeil and Chris Townly would welcome your advice on ways to improve this important part of the Group's role. In previous editorials, I have asked for any suggestions on how the newsletter can be more relevant to beginners but people have been a bit shy. Approach one of the above at the next meeting and make sure you're getting the most out of CAUSE.

There will be a "lucky door prize" at the next ordinary meeting - bring your membership card!

From the next meeting, the Committee members will be wearing name tags so take the opportunity to raise with them your ideas on any ways we can improve the Group.

Help Service

The following is a list of members who have volunteered to share their knowledge and experience with other members. If you have a problem or just need a bit of advice in any of the areas listed, please ring during the hours shown.

Paul Martin	10-10 M-Su	2514141	what's happening
Simon Tow	6-7 pm M-F	2888362	hard disks, Digiview
Jeff Wilson	6-8 pm M-F		
	4-10 pm S-S	2477330	City Desk, educational software
Gary Duncan	6-8 pm M-F	2319801	general C programming
Mark Hohmuth	6-9 pm M-W	2975952	beginners, PD software, Excellence!
David Wilson	6-8 pm M-Th	2918324	Phasar, Scribble!
Frank Keighley	6-7 pm M-F	2396658	laser printing, Pixelscript, desktop publishing
Peter McNeil	6-8 pm M-F	2545545	bulletin board
Doug Stone	6-9 pm M-Su	2516347	general help
James Dempsey	7-9 pm M-Su	2910147	Modula 2
Robert van der Meer	6-8 pm M-F	2417113	desktop video
Wayne Rochester	6-10 pm M-F	2479093	assembler, general programming
Andrew Crawford	7-10 pm M-Su	2582685	beginners, AmigaDOS, file transfer IBM - Amiga
Fred Pollum	6-8 pm M-Su	2810842	video, digitising, drives, joysticks
Michael Thong	6-8 pm M-Su	2822323	hardware interfaces
Gavin Voigt	6-8 pm M-Su	2547821	hardware

Public Domain Software

Fred Fish:	1 - 360
	catalogue disk
AMICUS:	1 - 26
AMICAN:	various
Compilations:	
(from Fish)	Games 1 - 4
	Utils 1
CAUSE PD:	Vols 1, 2, 3 and 4

To obtain disks or to make contributions, please contact the Public Domain Librarians;

Southside	Simon Tow	2888362 (h)
Northside	Lawrence Coombs	2515523 (h)
	Berenice Jacobs	2547248 (h)

Cost - copying fee \$1.00 per disk. Disks can be provided by the members or blank disks held by the Librarians will be supplied at cost.

Hardware Library

The group now has the camera for our Digiview but, due to the delicate nature of the camera, it will not be lent out for general use just yet. It will be available at monthly meetings for instructional purposes in readiness for lending.

Please contact Robert van der Meer who is the coordinator of the Desktop Video SIG. He may also be able to arrange to have pictures digitised.

Hardware Hackers' Herald

by Peter McNeil

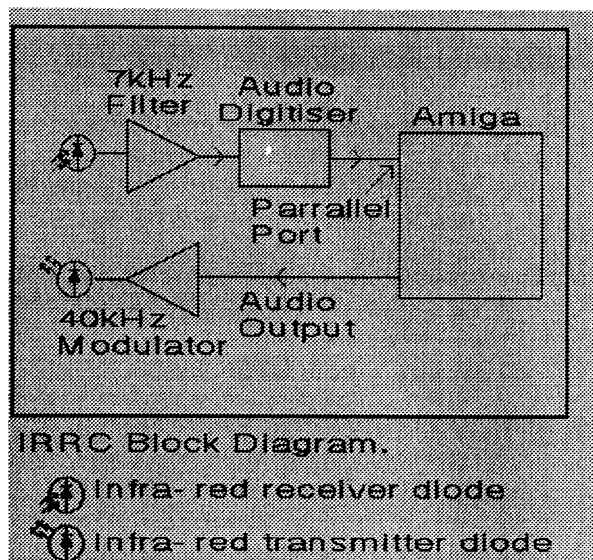
Using Infra red to re-ignite a joint on hardware bashing Sunday.

Guess what!? I'm going to finish the articles on the infra red learning remote control for the Amiga! Honest. Also in this article we chat about the new monthly hardware bash, and the new dealer & service centre feedback service CAUSE is setting up.

Last month first... I am thrilled with the response to my plea for articles and stories for me to write up....None. "Never, in the history of user groups, have so many, owed so much, to so few..."

Relash.

Last month I included a story about a machine that came back from a ComCare agent. I am pleased to say the the ComCare agent, ABM, are going to reply to that article elsewhere in this newsletter. I encourage people to write responses to anything we say or write, a one sided debate or story is not only unfair but also uninteresting.



First monthly Sunday Hardware bash'n'fix

The first monthly Sunday Hardware bash'n'fix happened on the 12th of August. These fixtures are held as a part of the newly rejuvenated Hardware SIG (Special Interest Group). The aims of this bash'n'fix are:-

- Teach hardware SIGgers more about the Amiga internal things.
- Fix or Modify (a limited number of) user group members machines.
- Reduce the burden of answering peoples hardware problems by increasing the base of knowledgeable persons.
- Act as part of an incentive scheme to increase the contributions to the newsletter and CAUSE by its members.
- Have fun.

This first bash we fixed two machines that had blown 8520 chips, modified an Amiga 500 to have 1Meg chip RAM with obese Agnus and put an obese Agnus in an Amiga 2000. All for the cost of the spares and a newsletter article! Involved in the bash was the very capable Simon Tow, Simon Woods, Adrian Tritschler (my spell checker don't like names) and myself. Anyone who is interested in helping out in the SIG and would like to learn more about the hardware side of the Amiga you can contact me on 2545545.

The 8520 chips mentioned are programmable IO chips that quite often blow on the Amiga if you do silly things like plug in a disk drive while the machine is on. They (8520s) control the following things:-disk drives, serial port, parallel port, and keyboard.

Infra-red learning remote control - the final article.

Well two issues ago I said I'd have a circuit to do the bits and pieces required to make this thing sorta work. Well here they are. But first a quick recap. The method we are going to use to make this thing work is to receive the infra red signal via an IR receiving LED or transistor and filter out the 40-42kHz carrier signal leaving us with a square wavy control signal at about 2kHz. This control signal is then sampled by a normal sound sampler at around 22000 samples per second. The sound sample can now be played out one of the audio channels on the Amiga and used as the modulating signal for a 40-42kHz oscillator which is then used to drive an infra-red LED. Figure 1 shows a block diagram of the whole setup.

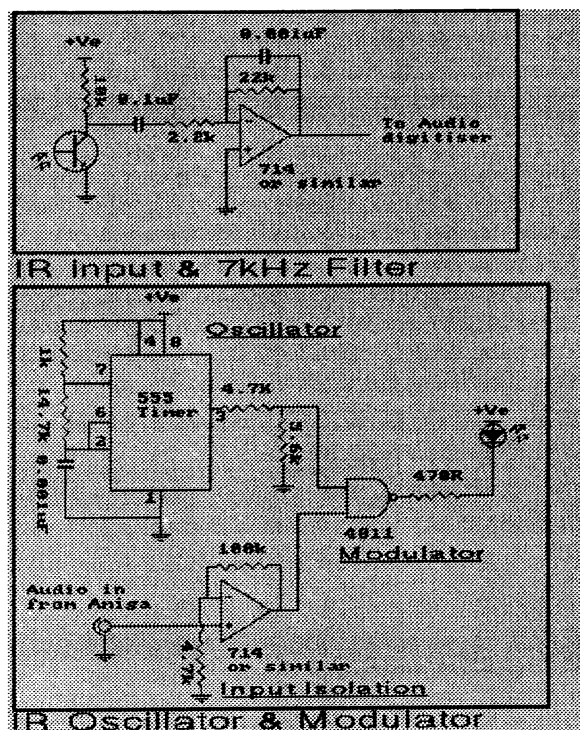


Figure 2 gives the circuit diagrams for the blocks that you have to build, the filter and the modulator. You'll have to play around with the circuits shown here to make them work properly with the various different IR receiver/transmitter diodes that are around. The receiver circuit shown here is not sensitive which means to teach the computer new controls you have to hold the remote directly in front of the receiver diode to receive a signal. The Transmitter isn't very powerful either but can easily be boosted with a driver transistor and a couple more IR LEDs. To get the best results you have to cut down the samples you take to just one or two cycles of the command. The remote controls continuously send out the same command over and over while you hold the button down, you generally only need one or two cycles of the command to make it work. This also save you disk space. Normally it will take about two kilobytes to save one command.

Well that's all I have time for this issue (short isn't it!). Next month I'll write about...um...something.

Desktop Publishing News and Views

*by Frank Keighley
of Desktop Utilities*

Continuing our discussion of Professional Page Version 1.3, we're looking now at some ways of getting the job done with this improved release of the package. For users keen on a variety of fonts, the full set of 35 Compugraphic Fonts (11 font families) is now available and is a valuable addition to the program. Text can now be viewed on screen in outline fonts for all the fonts normally found as standard on PostScript printers, giving a much truer display, and one which is more easily read and less likely to cause editing errors.

One of the problems that many users encounter with this DTP package is the lack of variable settings for hanging indents. In the requester where tabs are set, only one of the string gadgets is allocated for paragraph indents. However, by placing an empty text box to the left of a section of text, selecting the flow-around gadget, and sizing it as required, any indent can be achieved. This also provides a way of setting a right-indent on any section of text, a facility which is not otherwise available on PPage.

Another question concerns how to provide a frame and/or background for text and have this automatically change size and shape according to the text content as you edit. The answer is to select the text box, then choose the menu option for altering the current box, and switch on the outline gadget (top of requester). The text box, when selected, can then be treated like a graphic box, and be given borders of different line weights and types, and different background shades or patterns. Yet, like any other text box, it can easily be resized and adjusted in shape on screen using the mouse.

One of the common requirements in page layout, which arises, for example, in designing forms such as invoices or order forms, is the alignment of elements on the page. A series of straight lines can look a mess if there is even a slight variation in their length or placement on the page. The trick is to select "snap to grid" from "Preferences - Layout Tools", and to set the grid to the required interval. To create a series of lines for writing on, a grid spacing of .6 to .7 cm works quite well. If text has to match the grid, then the separation between lines of text can be adjusted using the "Type - Line Spacing" option. For more subtle placement of objects on the page, .2 to .25 cm normally gives fine enough control. Just select cm for each category in the requester, then set the string requesters to the required measurements. Afterwards, all objects will be positioned and sized as you choose, but will adjust automatically to the nearest grid lines. You no longer need to worry about the small discrepancies that can appear when you place objects manually.

A pleasant surprise when working with the text import module of Professional Page is that it is quite tolerant of variations. Ironically, it is far better at importing files from IBM WordPerfect 4.1 than Amiga WordPerfect 4.1.9 was. (In Version 4.1.11, an extra IBM WordPerfect import module has been added to Amiga WordPerfect.) Select the right text format (under "Preferences" menu), then select the cursor gadget, then choose "Project - Import - Text", and find the right file through the requester which appears. Afterwards, click into a text box, then select paste from the "Edit" menu.

For ASCII text which requires carriage return stripping, try this procedure:

- make sure each paragraph break has a double carriage return
- make a double carriage return at each permanent line break (like this one)
- use "Edit - Replace" to insert a symbol such as ##, which does not otherwise appear in the text, instead of each double carriage return (use CTRL-J for CR)
- replace all remaining carriage returns with spaces by the same method
- replace all chosen symbols (such as ##) with double carriage returns
- if you do this often, think about using a macros program to do all of this automatically whenever required
- use the same method for importing ASCII files into your word processor (and in the case of WordPerfect, macro capability is built in).

A hint on page handling: to insert a page, create it, then select "Page - Alter - Current", delete the page number and insert the required one. Other pages will be moved forward automatically.

To put wide tables or other "sideways" material into documents while retaining normal headings and page numbering is quite possible, though you won't see the result displayed on screen, nor can it be output to a non-PostScript standard-width printer. PostScript output has a landscape option which can be invoked through "Page - Current - PostScript Output Specs". The normal component (eg heading and page number) should be on one "page" of the document file, and "No Eject" should be selected in Output Specs. The second or sideways "page" should be set to 90 degrees rotation, the page size set with x and y values reversed (eg x=29, y=21 for A4) and the "Output Page Size" in the Output Page Specifications requester MUST match the one in the Current Page Format requester, but with the values reversed, eg 21 x 29. The Y-value of "Posn" (position) should be set to the portrait height of the paper, eg 29 cm for A4. This example places the "top" of the landscape component at the left side of the sheet when the sheet is viewed in normal portrait position.

A final subject: speeding up the screen refresh rate. Try switching off both grid and outlines when they are not needed. Use a black and white wireframe display with Quickmove (Preferences menu). By the way, you won't see graphics in their normal form while Wireframe is switched on. For example, grey fills will not be displayed. Finally, use a text editor in preparing text for large documents, rather than trying to type and edit them on screen.

AMIGA BUREAU IN CANBERRA

Laser printing ~ Scanning

File conversions ~ Software

New:

Contact: dials phone, prints labels, ARexx port

CrossDOS 4.0: the MS-DOS filing system for the Amiga

Art Department: loader modules for Gif, TIFF, Targa etc.

Desktop Utilities

PO Box 3053, Manuka, ACT 2603

Tel. 239 6658, BBS 239 6659, Fax

2396619

The minimum recommendation for running a Point system is two 3.5" floppies and a megabyte of memory. A 2400BPS modem is pretty well mandatory, but you can get away with 1200BPS if your BOSS lets you. Don't even think about using 300 baud modem. I am of the opinion that it would be nigh on impossible to run a POINT system on a basic Amiga with only 1 disk drive and 512K of memory. I

could be proven wrong, but I can guarantee that the hassles and peregrinations involved in making such a small system actually produce results would be make the whole exercise a waste of time and effort.

The BEST way to run a Point is to own a hard disk and a lot (2megs or more) of memory. I struggled when using a 2 disk, 1Meg memory A1000 setup, and found pointing from a hard disk basis to be a wonderful feeling. Swapping disks is something even a 2 drive user will find necessary to do.

Additional Information:

This article isn't intended to be a major definitive piece. There is a wealth of information that I have omitted, either purposely or otherwise, from this article. Documentation for the individual programs that constitute a Point system runs into the hundreds of Kbytes, and it would be folly to assume that one can cover all bases in a single 20K document.

Point software is available for downloading from the CAPITAL BBS. Individuals also have copies of the software, and, most importantly, working configuration files. I cannot stress the importance of WORKING configurations. The number of permutations possible in the various configurations for the programs I describe is staggering - and if you have a mistake, there is little to help you find out what and where the problem lies.

The best mechanism for setting up a point system is to contact a Point user who is willing to help you, on your BBS. Usually a person who has a 'Chameleon .10' or 'Amypoint' tear off line in his/her messages. I would advise asking politely. :-)

Disclaimers and acknowledgements:

Although the information I've provided is done so in good faith, if any or all of it is wrong, I cannot accept responsibility for any damages, either direct or implied, from using or misusing said information. So, if whilst reading the article, the family dog escapes the confines of your house, and bites a policeman on the ankle, and the policeman arrests you and you are thrown in jail, then don't blame me. :-)

This article is copyright (c) 1990 by the author (Andrew Clayton). It is freely distributable to User Groups newsletters and BBSes.

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 SEAdog, ARCmail - Thom Henderson, SEA Inc.
 Zmodem - Chuck Forsberg, Omen Technologies Inc.
 ConfMail - Bob Hartman, Spark Software Inc.
 EchoMail - Jeff Rush
 Cygnus Ed Pro - CygnusSoft - ASDG Inc.
 TrapDoor - Maximilian Hantsch and Martin Laubach
 Chameleon - Jeurgen Hermann
 BinkleyTermAmiga - Jeurgen Hermann
 EchoSave - Jeurgen Hermann
 EchoText - Jeurgen Hermann

FastPoint - Paul Black
 RMB - Rob Tillotson
 WelMat - Michael C. Richardson (Sandelman Software Works)
 LHARC - Paolo Zibetti, Haruyasu YOSHIZAKI
 Zoo - Rahul Dhesi
 ARC - Raymond S Brand, SEA Inc.
 Disclaimer is a trademark of Bell Labs. :-)

Addition thanks to:

Alan Salmon (Sysop, PCUG) who imported the original AMYPOINT package from Lightning BBS in Perth.

Simon Blears (Sysop, Lightning BBS) who imported Amy-point from Germany.

Basil Chupin (Sysop, CAPITAL BBS) - who puts up with lots of hassles!.

Peter McNeil (Sysop, CAUSE BBS) - who also puts up with lots.

Scott Furry (Sysop, Ghost of Opus) - who reinstated LTUAE in Canberra, thus my need for a POINT.

Dac.

June 1990.

COMPLITERACY

LEARN HOW TO USE YOUR AMIGA

CompLiteracy is a partnership of computer professionals who specialise in computer education and microcomputer software. All our course and promotional materials are prepared using the Amiga.

ALL CAUSE MEMBERS PRODUCING THEIR MEMBERSHIP CARDS RECEIVE A 30% DISCOUNT ON THE COURSE FEE.

This comprehensive course fully covers Workbench and the CLI. There are now also courses on word processing, spreadsheets, graphics and animation.

CompLiteracy
PO Box 74
Weston ACT 2611

Ph 06 2888 522

Education Now!

by Jeff Wilson

Speller Bee Stings Spellbound

Before we sink into the meat of this review, please note that this review consists of my opinions and my opinions alone. This means that I am not concerned if you disagree with what I've written as this is only a guide to the unwary and new people in an attempt to save them a little money.

Speller Bee and Spellbound are both aimed at improving the spelling abilities of the kindergarden level, through to Senior primary school. Only one of these products is close to achieving this in my opinion.

They both allow the user to enter their own word lists or make use of the pre defined word lists built in to the games. One of my first complaints lies with the fact that Spellbound makes the startup stage awfully hard and discourages the younger ones before they have had the chance to begin. Even if you want to use the built in word list in Spellbound, it is necessary to click-on each word in the list. This is not a problem with Speller Bee, it is only necessary to type in what list you require.

Both programs allow you to change the word sounds so that the pronunciation can be made as near as possible to the correct sound. Spellbound's manual is properly the better where this is concerned, as it gives you sample sounds to follow.

One nice feature of Speller Bee that my children especially liked, was the guided tour. This takes you through each section of Speller Bee and graphically shows them each section along with the relevant sound effects. Also there is a built in help section that they can access throughout the lesson if they are not sure of what they are doing.

There is a large selection of games for Speller Bee making the lasting interest of greater value. Along with the games on Speller Bee are the spelling tests which not only quiz your children like school but also allows them to record their scores. This in turn allows you to take note of their scores and offer guidance where needed.

Another good point of Speller Bee is its ability to be used by more than one person at a time. It allows for people of different ages and spelling abilities to play games together by allowing each person a separate set of words from different levels.

Speller Bee allows you to print out the results of spelling tests. This allows the child to show off his spelling ability to other people who are unable to watch them on the computer such as Grandparents who live elsewhere.

By now, I guess you have the opinion that I've formed a slight bias towards Speller Bee. If this was your thoughts, then you were correct as I've found little in Spellbound that justifies its price. Speller Bee is far superior in all areas apart from the one that I've mentioned above. One other area that it is superior is in the area of backing up. Speller Bee is protected and Spellbound can be put on your hard disk which is a must for educational software as far as I'm concerned.

One last hint for using Speller Bee. If it malfunctions upon startup, then the probable cause is that you have extended memory which Speller Bee doesn't cater for. The easy way out of this is to put one of the no fast mem custom bootblocks on your disk which will turn off fast ram on boot up.

I would like to hear from anyone concerned with educational products used with the Amiga or better still any ideas you have concerning products that would enhance the educational side of the Amiga.

Dalton's Bookshop

**Capital Centre
Canberra**

is offering a 10% discount to CAUSE members
off the recommended retail prices
of computer books.

See the great range in the Marcus St store.

Databases, Spreadsheets and ????

Paul Blair

For quite a number of years now, I have been using a wide variety of so-called "productivity tools" on a variety of Commodore computers, and writing about my experiences both good and bad. The articles have had quite wide circulation here and overseas, and I think I have been able to help a wide variety of new and experienced users.

Most of my scribbles have had to do with SUPERBASE - the database package written and marketed by Precision Software Ltd in the UK. Over the years, I have been able to forge a worthwhile relationship with PSL which has enabled me to get news from them and offer suggestions to them. Because there has never been much in the way of formal support for their products in Australia, I guess I have been their de facto Technical Department here.

That's not all bad, of course. At least I have plenty of experience with the various packages they have produced, and it's always rewarding to be able to help people find their feet with databases and so on.

Precision Software have released two versions for the Amiga - Superbase Personal and Superbase Professional. These versions are considerably more powerful than those in use for the 8-bit C=64 and C=128 machines. Whether you're making the transition or starting out afresh, I would be happy to offer some sort of help to people through the magazine.

So, at the invitation of your Editor, I would like to ask you whether you see value in running an occasional series in your magazine? Whether it be purely Superbase, or maybe a mix of database with spreadsheet will depend on what you want, and the level of difficulty that you suggest.

Before launching out on this stuff, I want your opinion. If I get dozens of phone calls, then it's full steam ahead. If you want to start from the very start, then that's where we will start. If you all yawn and say "ho hum", then I'll go on with something else.

Ring me on 274 7271 (work, 8-4) or 288 3584 (home, 7-9 most nights or any time at weekends) and tell me what you think.

PS... some of you may have seen Superbase running on an PC under Windows, or even be using it. The PC version is more comprehensive and yonks faster than the Amiga release - but that's being fixed right now. A NEW Amiga Superbase is coming soon.

Re-Box

by Piers Goodhew

At the June CAUSE meeting mention was made of a fiendish new product for A500 owners that was called an "A1500", which was basically a re-box kit that transformed the 500 from its cheap, nasty one-box self into a nice, modular computer. This was of particular interest to me, because I had been unable to wait for some third-party to get it together to produce such a thing back at the start of this year, so I found a box and transplanted the thing. This is quite a simple operation, you only need to make a new long keyboard cable and find a box, the 500 is fairly modular inside.

The problems with the A500 packaging, as I see them, are: The way the disk drive points (you can't sit anything next to the right of the computer or you can't get disks in/out); you can't put a monitor on top of it - all the cables at the back mean you need to have the monitor quite a long way back from the machine; there is a special overhang at the back so you can't see any of the plugs/sockets you need to deal with and, this is especially annoying with the mouse/joystick plugs.

As 500 owners should all be a) Major cheApskates and b) fiendish hardware-hackers, I've decided to go public on my "mod", which gave me a nice, small, modular A500 for under \$20.

This "Mod" will give you:

- A detachable keyboard;
- A Forward-facing disk drive, and internal room for a second;
- A reasonably small 40x33cm footprint;
- Space on top for a 1084 monitor;
- Joystick/Mouse ports on the Right-hand side, like the 1000 has;
- Rear sockets that can be seen.

Before you rampage off into your precious Amigas, I must include the legal disclaimer that: I take no responsibility for damage caused to your amigas while performing modifications inspired by this article, and provide no guarantees on your own workmanship.

But, having said that, (and, really, I have to) if you stick to the general plan here, I can't think of any way that you could fry the 'Miga. Mine works perfectly well, I wrote this with it, and I've had it in some form of new case without any trouble for most of this year, with A501 expansion and an external drive. No probs.

All of the Electronics components mentioned here are available from **Dick Smith Electronics** (Fyshwick, Belconnen; hereinafter known as "DSE"), the Hardware parts should be at any hardware store, and other stuff is mentioned as it arises.

What You'll Need:

- A drill, with quite a range of drill bits (big ones, small ones)
- A screwdriver (two, actually, phillips/posidrive and normal chisel tip).
- A fine saw
- A few files (including a nailfile for precision work.)

Other tools can be handy - especially if you can get a jigsaw, which makes making the drive holes much easier. To open up the 500 you'll also need some kind of small Hex-Key for the star-shaped screws.

Before this article starts, it is assumed that you have already got the 500 apart. This can be learned-as-you-do-it quite safely. As well as the 6 screws, the case is held together by two clips, which will require a bit of persuasion. The keyboard and drive unplug easily, and the drive also needs unscrewing - it has some spacers at the back, remove these. (you may also have to take the top of the shielding off to unplug it. see **Step Two**).

Stage One: Box Construction/Considerations.

You may wish to look around for other box options, but take it from me, there are very few. A metal box is nice in that you can make a much lower object - the A500 Motherboard comes inside a metal shield that is excessively tall. The A500 PCB is 370x260mm, but leave some room around the sides - mount the PCB flush with the back left edges of the box, to give access to the plugs/sockets.

I always thought a DIY wood box would be good (most of this year, the 'miga has been in an old instrument box I happened to find) but I was put off by the enormous difficulties involved in getting the wood cut right. The **Timber Centre** (which is also Mitre 10) in Colbee Court, Phillip has a saw out the back that does all this for you, for a *pittance*. The measurements are not always 100% right, but it's always cut square, and all bits you ask for of the same length will be cut at once, and thus really be the same length. You don't have to use the Three-Ply wood - but make the case a bit taller, using one piece will halve the cost of the box (but it's not expensive anyway.)

12mm Particleboard:

1x 400x330mm; 2x 330x100mm; 1x 400x100mm
and four small, roughly square, offcuts

3-Ply wood:

1x 374x330mm; 1x 400x about 40mm

About 8 countersunk woodscrews 3cm or thereabouts.

Drill all the needed holes first then assemble the pieces as shown in **Fig. 1**, drill all screwholes and countersink them (flare the outer hole with a bigger drill-bit) *before* putting in the screws (particleboard will just crumble otherwise). First do the front and two sides (to get the raised front exact, rest some of the offcuts underneath it when lining up), then the put all the various bits of the bottom in, just glue the 3-ply to the offcuts, they're too thin for other stuff, but drill and screw them to the sides.

Assemble the top and then put it in place.

To hold it there I drilled four holes at each corner through it and into the sides. Then into the sides I put four bits of cut nail, that only poke out a few millimetres and go into the holes in the top piece.

Now put filler in all the countersunk screwholes, and into any large holes along the edge of the particleboard. I used epoxy auto filler, which you can get in most Dept stores and is de-

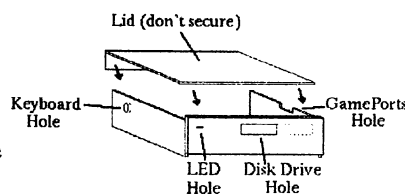
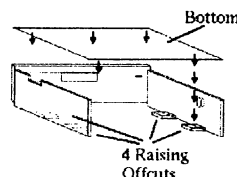


fig 1



First, assemble pre-cut lower half

signed to fill small dents in your car. This can also be used at various later stages

(Keyboard, Joystick connectors). Now paint the wood with a thinnish layer of undercoat and leave it to dry fully. Particle-board is very absorbent, so make sure it's sealed, then paint it with the outer colour. The nearest match I can find to 'Miga Beige is GMH "Kashmir White", which is quite a lot lighter, available in little touch-up tins at Dept stores near the epoxy filler. (Big W has both, for example).

Step Two: Sussing the Disk Drive

You will need:

A sheet of flat metal >8 inches wide and 5 long.
Two long metal screws (>5cm), and two bolts to fit them.
a bit of copper pipe to fit the screws into.



Reverse the drive plug at both ends for more length

You may need:

1m (shortest available) of 34-(or more-) wire IDC Cable
A few cm's of other wire.

If you are using the 33cm long case, the existing drive cables will not reach. The only reason for the 33cm case is that the 1084(or 1) monitor sits nicely on top of it. A 29cm case will still have all the monitor's feet on it, but the back hangs over a short way. My old case was 29cm long and I was able to use the original cables, but you have to have the drive quite near the centre. I have made a virtue of this necessity, and the new case has the drive in the same place (Gives it that A3000 look). You also have to reverse the cable (AT BOTH ENDS!!) to get some more length (see Fig. 2).

But, extending the cables is not all that hard. *Before* you head off to Dick Smith to buy all the electronics, open up the two-part IDC connector on either end of the wide disk cable. This only clips together, but sometimes you need about 75 fingers to lever all the right bits at the right time, don't (!) remove the wire from the connector, just get them apart. If you break either one (I broke both, they're fragile! Although, they do vary in fragility), when you're at DSE you can buy a pack of replacement 34-way IDC connectors. They didn't have any 34-way cable at DSE when I was there, so buy 40-way and peel off the outer 6 strands (don't remove the red stripe, go from the other end).

IDC connectors (stands for "Insulation Displacement Connection") are a very simple way of getting complex plugs made quickly. If you look at the one you've just opened: They consist of a whole set of little pairs of prongs, that come together in a V-shape. They work by forcing a standard-sized wire down into the gap, the prongs cut the insulation off the wire, and when it comes to rest at the bottom, the wire is in full contact with the prongs, and hence, the plug.

Thoroughly investigate the IDC connectors, and when you're sure you understand how they work, make yourself a length a good 6 to 7 cms longer than the old one - just to use up some of that costly metre they made you buy. Lie it next to one half-dismantled end of the old cable, red stripe at the same side of both, and note the orientation of the plug. Now, swap the wire over, making sure everything is lined up, and force the connector shut over the wire (you'll have to use a hammer or a vice to get enough force). The reason for all this caution is that you need so much force to get the two halves together that you won't know anything's wrong till it's too late. Trim off the excess wire at the end with a Stanley-type knife. Repeat this process at the other end.

For the other cable to the drive, the four-wire power connector the solution is less elegant. You cut all four wires in the middle, and solder in some extension pieces, then insulate them

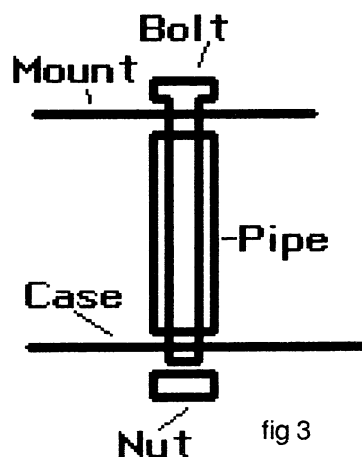


fig 3

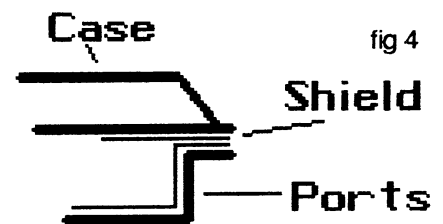


fig 4

with tape/heat shrink cover, or something.

That's the cables out of the way. To mount the drive proper inside, make up two "spacers" out of the long screws, bolts and pipe (see Fig. 3) the pipe should be made the same height as the 500's shield (presuming you're still using it). Lie the metal sheet flat in the front-right corner of the case, and drill two holes (wider than the

screws but thinner than the pipe) in each front corner straight through it and the bottom of the case.

Now take the sheet out and mark out where to drill the four holes where the screws go under the drive, drill them and mount the drive using the original four screws (even the one that used to go sideways). When the PCB is in, sit it on top of the shield, and screw the spacers together.

Step Three: Get the PCB in, and worry about the GamePorts.

You'll need:

3-7 short (1cm-ish), round-topped, woodscrews.
1m of 12-wire ribbon cable. (you can't buy shorter)

Remove the top of the metal shielding. Cut the overhang part off it (see Fig. 4, don't do this to the bottom half) with some meaty scissors and also cut a hole above the drive sockets to let them get out forwards.

If you're going to move the Joystick sockets, make sure you're Earthed, and remove the lower half of the shielding. This is held on by the little bolts on either side of the rear connectors. Now that the shielding is off is a good time to straighten out the overhang (if you're not doing this part you'll need to do this with some care and inconvenience). The easiest way to do this is to bash the thing flat with a hammer. Get the joyports out (lots of de-soldering) and solder in 9-wires of the 12-wire cable (rip the other 3 off) of an appropriate length into the PCB - check closely to see there are no solder joints between wires on the board before you put it away, then put everything back together - the PCB is now safe(er) again.

At this stage you'll have to consider the future of the Joystick sockets. First solder the old sockets onto the ribbon cable, if you have a meter test for shorts between the wires, then encase the whole 9 connections in a big unsightly lump of epoxy filler (don't make it *that* big or unsightly, though) This protects the joins from touching together or snapping off, which they do with monotonous regularity.

To mount them, I chiseled out a deep groove in the side of the case with a small screwdriver for all the prongs and wires and things to go down and screwed the sockets down into the sides, but another less destructive way would be to mount the sockets on a sheet of metal like they attached to the shielding, and screw that piece of metal to the case. If you do it my way, use very long screws and fully drill the holes before, or the old particleboard will be more particles than board.

Back to the PCB:

With the shield off, locate the hole in the top left of the board, which is not normally used, and screw the board to the bottom with it. Keep the board flush with the rear and left of the box.

Now put the shield on - plugging the drive cables in first and threading them through the hole. Screw the rest of the screws in, and sit the drive on top and mount it. You're almost ready now, all you have to do is deal with the keyboard.

Step Four: The keyboard.

You will need:

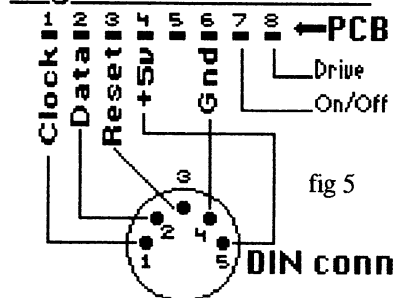
a 5-pin DIN panel mounting socket;
A 5-pin DIN line plug;
some 5- (or more-) core shielded cable (DES has 6-core).
Also, some glue and a chainsaw.

Fig. 5 shows how to make up a plug/socket for the keyboard.

Cut the cable-tie holding the cable to the keyboard and desolder it from the keyboard, you'll need to unscrew the decoding circuit board to get at it. Solder the appropriate wires to the panel socket, and leave the two LED ones free. When re-soldering your cable to the keyboard, use another cable tie to secure it, to tie a bit of wire around. Also, make sure the Shield of the cable is grounded at both ends, or you'll get some funny reset problems when you turn on peripherals).

Given all the hassle I'd originally had with the PCB case, I decided to saw up my old box to mount the keyboard - as you have most of the right grooves and tabs and holes and stuff provided. Another solution might be to get an A2000 keyboard from Commodore (I don't know how amenable they are to this) and use that - you have to add a transistor, apparently, to the de-

Keyboard Connector



NB: A500 manual is incorrect about this

coder PCB inside the keycase - just find all the components that are on your A500 one and not non the 2000 one and swap them. CBM might even let you have just the case for a keyboard, but you'd be lucky.

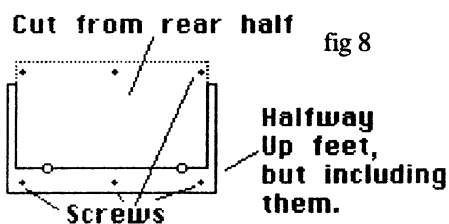
To do what I did, you cut off the upper half of the keyboard along the lines shown in **Fig 6**. Saw the bottom half off only around the edges (as shown at the top of **Fig 7**) - unless you really want to keep your keyboard at the same slant as before, for mine, it is way too steep. Keep the front feet attached to this portion - but have them stick out away from the main cut (see **Fig 8**). You should end up with a wide, flat, flimsy U-shape. Note the importance of sawing horizontally through the sides - otherwise the two halves will not line up. For the rest of the bottom, there is just enough flat plastic at the rear of the 500 case, again saw it horizontally as in **Fig 7**.

You'll avoid having to use the trapdoor, but part of the side-door will have to be cut up and glued on. Fit this flat bit to the U-

shaped bit - using the feet as holding tabs (refer again to **Fig 8**), and glue this lot together, and fill any cracks with epoxy filler. Use the old screws to secure the front, drill 3 holes in about the same places along the back, and secure some sort of receptacle for the screws to the upper half (I actually cut out the 3 posts at the back of the top of the 500 case and glued them in - this is quite messy) and put the old screws into that. I run the cable along behind the posts

and let it come out at the left of the keyboard - this puts its connection with the PCB under virtually no stress. There should be a photo around here somewhere of the keyboard shown from underneath - it doesn't look so good from behind, but who looks at it there?

Step Five: Disk Drive Bezels.



This is the final trauma - What kind of Faceplate (or "Bezel") to use for your df0:. I managed to cut the one in the A500 case out and use it (incidentally, the bezels and holes for 3.5"

drives measure 4" by 1"). Amiga drives (for the 500, 1000, 1010 and 1011) all have the same face dimensions, and they are all nonstandard. You can actually buy standard bezels, but they're of no use here. To use the indigenous one, you'll have to cut a little triangle shaped bit out (see **Fig 9**), and also a thin strip about 3mm wide of the bottom half of the case. Another solution is to get a bit of metal, cut the appropriate holes in it, bend in a section of the centre and attach that to the box. If you are buying a second drive, I strongly recommend you get one of the slimline variety, which have built in standard bezels. The simplest and most logical way to mount the second drive internally is to just plug it in on the outside, feed its cable in through the old Joystick holes, and attach it and all it's decoding circuitry to the metal plate.

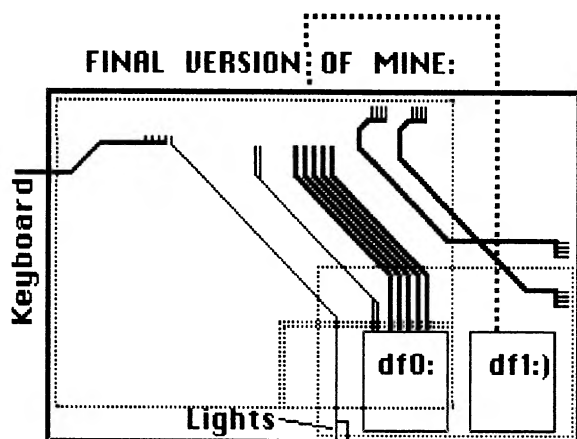
(I actually have two of these drives, we had an old 1010 drive lying around that was broken, and I put my drive in that. So now I have two matching drives).

Cut Wedge
out here.

fig 9

3mm of lower half

And now you should have something that looks like the photo, A compact modular A500 that (hopefully) hasn't cost you over \$20 (I'm not to sure about the price, mine was a prototype and got a fair bit more spent on it.) At any rate it should have been fairly cheap, and is compact and mine certainly looks good. So why not live a little, and introduce your Amiga to your Chainsaw? Take it from me, it'll change your life.



Editor's Note:

For technical reasons, we have not been able to reproduce Piers' two photos in this newsletter. However, they have been included on the latest CAUSE PD disk (no. 4) and should be in the next newsletter.

Public Domain Corner

by David Wilson

Due to the wide range of excellent public domain software available for the Amiga (and its growing all the time), we are going to be putting more emphasis on PD, both in this newsletter and at our monthly meetings. Jeff Wilson will be talking on SID a directory utility at the September meeting and future newsletters will have more reviews.

Mark Hohmuth has compiled a Fred Fish "best of" games disk and has started another.

Surf: Bezier Surface Editor by Piers Goodhew

Surf is a program, originally, on one of the Fish disks (all of which are held by the CAUSE). More importantly for all you CAUSE members is that the program is on the CAUSE BBS, in the "Graphics" section.

What the program lets you do is design 3D objects such as cups, vases, door handles, chair legs and so on. Anything which has a perfectly circular symmetry can be made and rendered in almost full 3D, with a light source and some degree of shininess at varying degrees of definition, and then save the image.

When the program runs, it opens a display screen with the options "Line", "curves", "wire", "shade" and "Map" along the top. You begin by pressing "Line":

You then draw a series of joined lines around an axis. You can then edit these lines into curves (press "Curves"), by moving two points around each line-segment - the lines curve towards these points, so you can turn a straight line into an "S" shape if you want.

Once you've got this edge shape, you press either "Wire" for a quicker, Hidden-line removed Wire-frame drawing or "Shade" for the full solid, illuminated drawing.

Surf works by then spinning this line around the axis, so if you had just a straight line, you would get a cylinder. If you drew an "S" shape, you'd get something like a birdbath. More complex lines produce all sorts of ornate, pillar-like objects.

The "Map" option still doesn't work, despite claims by the author. It is supposed to map an ILBM image onto the surface.

But, Surf also has a window open in the workbench screen, where you can adjust settings for most of the drawings. You can adjust the number of times the line is spun, and the number of sub-lines each line is broken up into to form curves. You can also adjust the shininess of the object, where the light source is and also the angle at which the object is rendered.

Surf is a very fun program, with it you can draw really quite complex figures, although it can get very slow and does use a fair bit of memory on figures that are on the complex side. Sculpt-Animate 4D it isn't, but it also doesn't cost \$769 and you won't visibly age while it loads in. By adjusting the angle of view and saving several subsequent renders, you can even do animation by loading these into DPaintIII. So, puns aside about "Surf is value for money", Surf is really a very good program considering it's free, and it offers hours of entertainment, so rush out and obtain it!

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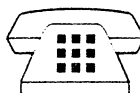
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